

Appl. No. 10/532,626
Amdt. dated June 8, 2007
Reply to Office action of March 8, 2007

REMARKS

Claims 8-26 and 28 are presently in the application. Claims 1-7 and 27 have been canceled. Claims 20-24 have been withdrawn as directed to a non-elected species.

Claims 8 and 16 have been amended to make it clear that in applicant's invention the "second outlet conduit" (16) provides a second, alternative flow path from the control chamber to the low-pressure side when the valve is in its third position.

Claims 8-19, 25, 26 and 28 have been rejected under 35 U.S.C. 102(e) as anticipated by Stoecklein et al (US Patent Publication No. 2002/0134853). Reconsideration of the rejection is requested.

Independent claims 8, 16 and 28 are each directed to a fuel injection device for internal combustion engines comprising, inter alia, "an outlet throttle (8) located between the control valve (6) and the low-pressure side (7)."

In rejecting claims 8, 16 and 28, the examiner reads the claimed outlet throttle located between the control valve and the low-pressure side on element 66" of the reference. However, Stoecklein et al describes element 66" as a downstream part of the outlet conduit 66. See, para. [0040], ll. 3 and 4. There is no description of 66" as a throttle or any suggestion that 66" functions as a throttle.

To support a rejection of a claim under 35 U.S.C. 102, it must be shown that each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

Appl. No. 10/532,626
Amdt. dated June 8, 2007
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Stoecklein et al does not show or describe an outlet throttle located between the control valve 76 and the low-pressure side 66". For this reason alone, Stoecklein et al does not anticipate claims 8-19, 25, 26 and 28.

Further each of claims 8 and 16 requires a control valve having first, second and third valve positions, the control valve blocking the communication of the control chamber (2) with the low-pressure side (7) in its first position, the control chamber (2) communicating with the low-pressure side (7) via a first outlet conduit (14) when the control valve (6) is in its second position, and the control chamber (2) communicating with the low-pressure side (7) via a second outlet conduit (16) providing a second, alternative flow path from the control chamber (2) to the low-pressure side (7) when the control valve (6) is in its third position, said second outlet conduit (16) having an outlet throttle (15).

In rejecting claims 8 and 16, the examiner reads the “second outlet conduit” on the inlet conduit 60 (see, para. [0025], ll. 5 and 6) of Stoecklein et al. However, in Stoecklein et al’s device, when the valve 70 is in its third position, i.e., when the shutoff element 76 is moved to contact the seat 82, there is no flow of fluid from the control chamber 58 to the outlet conduit/low-pressure side 66. Stoecklein et al makes it very clear that the conduit 60 is an inlet, not an outlet to the control chamber. This is a fact because the chamber 44 is always at system (high) pressure. The control chamber 58 is never at a pressure which is higher than the pressure in chamber 44. Therefore, fluid cannot flow from the control chamber 58 to the chamber 44. Thus, in Stoecklein et al, there is no second, alternative flow path from the control chamber 58 to the low-pressure side 66 when the control valve 70 is in its third position.

Appl. No. 10/532,626
Amtd. dated June 8, 2007
Reply to Office action of March 8, 2007

The examiner rationalizes that since one can draw a line from the control chamber 58 through the inlet conduit 62 into the high-pressure spring chamber 44 and through the bypass conduit 74 into the valve chamber 78, the control chamber 58 “communicates” with the outlet 66. However, claims 8 and 16 require more than a mere “communication” between the control chamber and the outlet. Claims 8 and 16 require “a second outlet conduit.” The conduit 62 is not both an inlet and an outlet conduit, it is only an inlet conduit. It never functions as outlet conduit. Also, the conduit 62 does not provide a second, alternative flow path from the control chamber (2) to the low-pressure side (7) when the control valve (6) is in its third position. In Stoecklein et al, there is no flow path from the control chamber 44 to the low-pressure side 66 when the control valve is in its third position.

Claim 28 requires the control chamber (2) to communicate with the low-pressure side (7) via a second outlet conduit (16) having an outlet throttle (15) when the control valve (6) is in its third position, whereby when the control valve (6) is in its third position, fuel flows from the control chamber (2) to the low-pressure side (7) through the second outlet conduit (16) and its outlet throttle (15).

In order to anticipate claim 28, the device of Stoecklein et al must perform the function recited in the “whereby” clause, i.e., “when the control valve (6) is in its third position, fuel flows from the control chamber (2) to the low-pressure side (7) through the second outlet conduit (16) and its outlet throttle (15).” In Stoecklein et al, in order for fuel to flow from the control chamber 58 to the low-pressure side 66 through the conduit 62 and its throttle 60, the pressure in control chamber 58 must be higher than the pressure in chamber 44. However, this never happens in

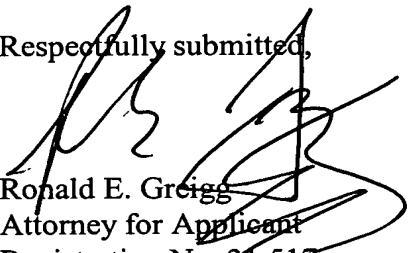
Appl. No. 10/532,626
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Stoecklein et al, because the pressure in control chamber 58 can never be higher than the pressure in chamber 44. Thus, the device disclosed in Stoecklein et al cannot perform the function recited in the "whereby" clause of claim 28.

In view of the above, Stoecklein et al cannot be said to anticipate claims 8, 16 and 28 or the claims dependent thereon.

Since the present rejection of claims 8 and 16 has been shown to be inappropriate, and thus generic claims 8 and 16 are allowable, it is proper to reinstate non-elected claims 20-24, and allow them along with allowable claims 8 and 16, on which they ultimately depend.

For the above reasons, entry of this amendment and allowance of all of the claims in this application are courteously solicited.

Respectfully submitted,

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